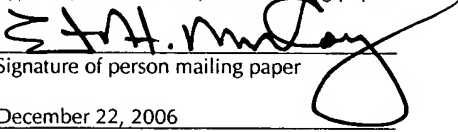




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Atty Docket No.: 1017.517

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Takehara et al. Art Unit: 2837

Serial No. : 10/773,483 Examiner: Jonathan Salada

Filed : 02/06/04

For : IMPROVED METHOD FOR ENERGY STORAGE FOR DC  
MOTOR POWERED LOAD HOISTING MACHINERY

Oakland, California  
December 22, 2006

Honorable Commissioner for Patents  
Alexandria, VA 22313-1450

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REMARKS

1. The title for the invention has been objected to for the reason that it is not descriptive: 37 CFR 1.72 (a). Applicants response is that similar titles have been considered acceptable in preceding US Patent No. 5,936,375 and in allowed related US Patent application SN 10/733484. These names are considered to be the most accurately descriptive phrases for describing the respective inventions.

The title of the present invention differentiates from the other two related cases by virtue of its differing feature. It is believed to be an accurate, succinct, and

descriptive title for the invention. Applicant is willing to consider suggestions by the Examiner for a new title. It is suggested that it be done by telephone conference (510.527.2485 -- 3-hour time difference).

2. Related copending application SN 10/773484 was allowed August 30, 2006, and the issue fee therefor paid November 29, 2006. Reference to the application is set forth in the accompanying amendment to the specification of the application.

3 & 4. Claims 1-4 stand rejected under 35 USC section 103 (a), as being unpatentable over Watanabe '892 and McCarthy '456. Watanabe is alleged to teach "in figures 1-8, a dc motor 10a power(ed) sheave 42 for elevator car 46 and counterweight 48. The motor is powered by supply 18 and thyristors 16. An emergency generator 28 supplies power in a backup situation."

Applicants would first like to point out the differences between Watanabe and the present invention. Applicants invention is for use in large load hoisting equipment which picks up multi-ton loads; particularly cargo containers, and provides a method for energy storage and recovery to assist continuously in the operation of the hoist.

Watanabe in contrast is for a particular type of passenger elevator control (thyristor Leonard type) for "controlling an elevator operated by an emergency AC generator..." which "emergency AC generators are generally low in capacity". Column 1, lines 6-11. There is no comparison in the machinery serviced by the method of the present invention or in the operation of the two sets of machinery. The technology is not interchangeable and therefore Watanabe is not applicable to the present invention: the present invention is a continuously operating system while Watanabe operates only in emergency situations when power fails.

It is especially important that it is admitted by the Examiner that "Watanabe et al(.) does not illustrate a flywheel back-up supply which provides power as needed (heavy load or regeneration)." The reason is that there is no relation between two technologies: Watanabe is intermittent (only imposed during emergencies) while the present invention provides continual power to the system when lifting a load. Supplying flywheel power to Watanabe adds nothing because it is not needed except in emergencies when the present invention would not function: there would be no power to turn the flywheel and it would take extra power from the limited emergency supply (when it is activated) to bring it up to speed to do work.

In an effort to supply the deficiency of the teaching in Watanabe, McCarthy is

alleged to state "in the Background of the Invention to be an improvement over Watanabe et al(.) teaches (?) that it is advantageous to provide a flywheel type back-up system which can absorb excess power in a under-load situation as well as provide boosted power in a heavy load situation to satisfy maximum power requirements", and "thus to utilize the system of McCarthy et al(.) would have been an obvious engineering design choice to one of ordinary skill in the art to satisfy maximum load requirements." These systems cannot be combined, if the Watanabe system kicks in in an emergency, there is no power for the McCarthy flywheel.

Of course the flywheel power supply is not new and really irrelevant. Applicants prior art '375 patent, shown in FIG. 3 of the drawings of the pending application, is much closer prior art than McCarthy. McCarthy does not teach the present invention because it uses a rectifier and inverter to power an **induction** motor: not a DC motor. But applicants present invention is for the purpose of providing an energy storage and recovery system for powering a DC motor. The system disclosed by McCarthy is actually shown in the prior reference Enoki '375 patent cited by applicants in FIGS. 1 & 3 of the present application.

The fact is that the '375 patent discloses the closest prior art to the present invention because the present invention was derived from it (both the patent and the present invention are owned by the same assignee -- Paceco Corp.). But the present invention is not obvious from the '375 patent because it is an improvement which permits a DC motor to be utilized for lifting large loads. Nearly 5 1/2 years elapsed from the time of the filing of the 1st application (the '375 patent) and the present application. It took that long for the technology, and for the need and use for the present invention, to evolve. The invention was and is not obvious.

It is further stated "as illustrated, McCarthy further illustrates the tachometer 40, voltage detection 35 at the motor side, current detection 34 for use within controller 51 which controls the power to the hoist motor 16. McCarthy et al(.) further states that various types of controllers may be utilized as long as the basic principle of the flywheel to provide and absorb excess energy is provided."

This additional reasoning adds nothing to the teaching of the present invention. It does not teach its use for a DC motor. The flywheel system is disclosed in the '375 patent identical to the flywheel system in the specification of the application of the present invention. The present invention is an improvement on the '375 patent and provides a means for employing a DC motor in the energy and storage system of the '375 patent.

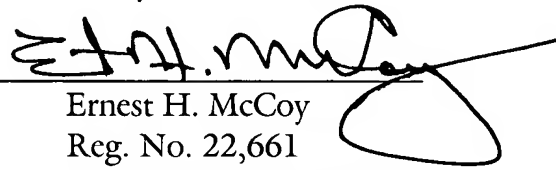
In view of these remarks, it can be seen that applicants invention and claims 1- 4 are not obvious or even partially taught by the Watanabe and McCarthy patents alone or in combination. It is believed that the application is in condition for allowance, and such action is respectfully requested.

Respectfully submitted,

Takehara et al.

By BRUCE & McCOY  
Attorneys for Inventor

Per

A handwritten signature in black ink, appearing to read "Ernest H. McCoy", written over a horizontal line.

Ernest H. McCoy

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